IN THE CLAIMS

Subject

1. (Previously presented) A real time video system for outputting to a screen signals for displaying color images that are adjusted for color blindness from original color images encoded in a real time video signal, the video system comprising:

a decoder for decoding the video signal into at least one original color signal associated with a color of the original image;

a compensation processor coupled with the decoder for receiving the original color signal, the compensation processor including a plurality of separate color point remappings that are non-modifiable by a user of the video system, the compensation processor structured to remap the original color signal into one or more color blind compensated signals by remapping color points from the original color signal, for compensating for at least a first type of color blindness; and

display circuitry structured to cause the screen to display the original color signal and the one or more color blind compensated signals simultaneously.

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2. (Previously presented) The system of claim 1, wherein the compensation processor is structured to generate two color blind compensated signals for compensating for the first and a second type of color blindness, and further comprising means for selecting to output one of the first and the second adjusted color signals.

3. (Previously presented) The system of claim 1, wherein the original color signal is associated with a series of ordered sets of original samples, and wherein each of the color blind compensated color signals is associated with a series of ordered sets of samples adjusted from the original samples according to a first color gamut adjustment predefined for the first type of color blindness.

4. (Previously presented) The system of claim 3, wherein the original samples represent original values, each original value associated with a content of a respective one of a plurality of predefined primary colors, the color blind compensated samples represent adjusted values, each adjusted value associated with a content of a respective one of the primary colors, and wherein the system further comprises a memory coupled with the processor and having stored therein the sets of original values and the first set of adjusted values.

5. (Original) The system of claim 4, further comprising means for combining the original samples of a single ordered set thereby generating a single sample for inputting into the memory as an address.

6. (Original) The system of claim 4, wherein the memory reads out a single sample for each input ordered set of original samples, and further comprising means for extracting from the sample output by the memory an ordered set of adjusted samples.

Claims 7-11 are cancelled.

12. (Previously presented) A method for adjusting real time color images encoded in a video signal suitable for producing a display on a screen comprising:

decoding the video signal into at least one original color signal associated with a color of the original image;

using a reference color image to generate at least one reference color signal associated with a color of the reference image;

generating an adjusted signal from the reference color signal according to a tested transform associated with a tested type of color blindness, the transform non-modifiable by a user of the display;

applying the adjusted signal to the screen, the screen thereby displaying color images adjusted for the first type of color blindness;

partitioning the screen into a plurality of sections, wherein the adjusted reference image is displayed in only one of the sections;

accepting an input from a viewer as to whether the adjusted reference image is desirable; and

if the adjusted reference image is desirable, using the tested transform as the first transform.

13. (Cancelled)

14. (Previously presented) A method for adjusting real time color images encoded in a video signal suitable for producing a display on a screen comprising:

decoding the video signal into at least one original color signal associated with a color of the original image;

digitizing the original color signal to produce at least one original value;

generating an adjusted signal from the original color signal according to a first transform associated with a first type of color blindness by looking up in a memory an adjusted value corresponding to the original value;

applying the adjusted signal to the screen, the screen thereby displaying color images adjusted for the first type of color blindness;

selecting a set of coordinates for defining a color space;

selecting a type of color blindness;

characterizing the selected type of color blindness with respect to the coordinates as at least one discernible region in the color space;

selecting a color gamut adjustment that maps at least one region outside the discernible region into the discernible region;

generating the original values and the adjusted values that perform the color gamut adjustment; and

storing the original values and the adjusted values in a look up table in the memory.

15. (Original) The method of claim 14, wherein the memory is an EPROM, and wherein storing is performed by burning in the EPROM.

16. (Currently amended) The method of claim 14, wherein selecting a color gamut adjustment includes contracting a portion of the discernible region.

17. (Currently amended) The method of claim 14, wherein selecting a color gamut adjustment includes rotating at least a portion of one of the regions.

Claims 18-35 are cancelled.

36. (Previously presented) The video system of claim 1 wherein the compensation processor is structured to remap color points from the original signal by using a color lookup table.

37. (Previously presented) The video system of claim 1 wherein the compensation processor is structured to remap color points from the original signal by using a color transformation algorithm.

38. (Previously presented) A method for generating a color blindness compensating remapping table, comprising:

selecting a set of coordinates for defining a reference color space;

selecting a type of color blindness;

relating the selected type of color blindness to the coordinates of the reference color space to define a discernable region for the selected type of color blindness;

selecting a color gamut adjustment that maps at least one location in the reference color space that is outside the discernible region into the discernible region;

generating original values identifying locations within the reference color space;

generated shift values from the original values based on the color gamut adjustment;

relating the original values to the shift values; and

storing the original values and the shift values in a look up table in the remapping table.

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39. (Previously presented) The method of claim 38, wherein the remapping table is embodied in an EPROM, and wherein storing is performed by burning data in the EPROM.

40. (Previously presented) The method of claim 38, wherein the selected type of color blindness is deuteranope.

41. (Currently amended) The method of claim 38, wherein selecting a color gamut adjustment includes rotating related locations in the reference color space relative to the reference color space coordinates.

42. (Previously presented) The method of claim 38, further comprising:

selecting a second type of color blindness;

relating the second type of color blindness to the coordinates of the reference color space to define a second discernable region;

selecting a color gamut adjustment that maps at least one location in the reference color space that is outside the second discernible region into the second discernible region;

generated a second set of shift values from the original values based on the color gamut adjustment;

relating the original values to the second set of shift values; and

storing the second set of shift values in a second look up table in the remapping table.